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EXAMINER	
GATES, ERIC ANDREW	
ART UNIT	**PAPER NUMBER**
3722	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/680,146	**Applicant(s)** BAI, LI KUN
	Examiner Eric A. Gates	**Art Unit** 3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-28_ is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-24 and 26-28_ is/are rejected.
7)☒ Claim(s) _25_ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on _08 October 2003_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☒ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

   a. Line A-A is not shown in Figure 22.
   b. Reference number 32 is not shown in Figure 2.
   c. Reference number 2 is not shown in Figure 6.
   d. Reference number 66 is not shown in Figure 10.
   e. Reference number 24 is not shown in Figure 13.
   f. Reference number 10 is not shown in Figures 14, 18 or 24.
   g. Reference number 21 is not shown in Figure 14 or 15.
   h. Reference number 134 is not shown in Figure 16.
   i. Reference number 35 is not shown in Figure 25.
   j. Reference number 293 is not shown in Figure 29.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

k. Figure 25 is not referenced in the "Brief Description of the Drawings" section.

l. Collar 35 in Figures 14, 15, 16, 17, 18, and 21 is described as collar 10 in the "Detailed Description of the Drawings" section up to page 14. It is then described as collar 35 starting on page 15, paragraph 3 of the specification, in reference to Figures 24 and 25.

m. On page 15, paragraph 3, reference number 242 is referred to as both a block pad 242 and a welding pad 242.

n. Reference number 301 in Figures 1, 6, and 13, and reference number 298 in Figure 29 are not described in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowley (U.S. Patent 431,107) in view of Carter (U.S. Patent 2,679,770).

5. Per claim 1, Cowley discloses a drill accessory for receipt in a drill chuck, said drill accessory comprising an elongate drive shaft 1 having an implement receiving socket 7 at one end and a drive end 1 for engaging a drill chuck at the opposite end.

Said drill accessory further includes an implement receiving collar 3 about an intermediate portion of said drive shaft 1. Cowley further discloses said implement receiving collar 3 to have a plurality of implement receiving recesses 5 for maintaining an implement 9 in a storage position adjacent an in use position, where an implement 9 is received in said implement receiving socket 7 of said drive shaft 1, each implement receiving recess 5 locating an implement received therein to one side of said drive shaft 1. Cowley does not disclose rotation of the drive shaft 1 without rotation of said implement receiving collar 3, or each implement to be partially received in said implement receiving collar 3. Carter teaches a tool selective device 1 which houses a plurality of implements 18. Said tool selective device 1 comprises an implement receiving collar 9 with a plurality of implement receiving carriers 12, 13, 14, 15, for the purpose of providing implements 18 for rotational use by drive shaft 11 without causing the rotation of the implement receiving collar 9 or the implement receiving carriers 12, 13, 14, 15. Therefore it would have been obvious to one having ordinary skill in the art of power drills to combine the drill accessory of Cowley with the implement receiving collar and carriers of Carter in order to obtain a drill accessory that is rotationally balanced during use.

6. Per claim 2, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving recess 5 shaped to releasably maintain an implement 9 and allow hand removal of said implement 9 from said collar 3.

7. Per claim 3, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses a plurality of implements 9, each of which is receivable in any of said implement receiving recesses 5.

8. Per claim 6, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving recess 5 having an associated implement receiving carrier 8 releasably receiving an implement 9, each implement receiving carrier 8 being movable from a storage position to where a received implement 9 is stored in said recess 5 to an in use position where an implement received in said implement carrier 8 is aligned with said implement receiving socket 7 of said drive shaft 1. Each implement receiving carrier 8 in said storage position locates an implement 9 received therein to one side of said drive shaft.

9. Per claim 11, the modified drill accessory of Cowley discloses the invention as claimed.

10. Claims 4-5, 7-10, and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowley in view of Carter and further in view of Holland (U.S. Patent 6,053,675).

11. Per claim 4, the modified drill accessory of Cowley discloses the invention substantially as claimed, except Cowley does not disclose each implement 9 to have a recessed groove intermediate the length of the implement for cooperating with a locking spring associated with said receiving socket 7 of said drive shaft 1. Holland teaches an implement 14 with a recessed intermediate groove 16 for the purpose of cooperation with a locking spring 60. Therefore it would have been obvious to one having ordinary

skill in the art of power drills to combine the modified drill accessory of Cowley with the grooved implement and locking spring of Holland in order to have implements that are easily inserted into and removed from the drill accessory.

12. Per claim 5, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses a non-rotating implement receiving collar that may be used as an outer hand grip for the purpose of facilitating positioning said drive shaft during rotation thereof.

13. Per claim 7, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving carrier 5 to be pivotally secured to said implement receiving collar 3 and is pivotally moved between said storage position and said in use position.

14. Per claim 8, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses a plurality of implements 9, each of which is receivable in any of said implement receiving carriers 5.

15. Per claim 9, the modified drill accessory of Cowley discloses the invention as claimed, as Carter further discloses the use of a spring 26 for releasable securement in any of said implement receiving carriers 12, 13, 14, 15.

16. Per claim 10, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement 9 received in any of said implement receiving carriers 5 is slidably displaceable within the implement receiving carrier 5.

17. Per claim 12, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving carrier 5 is pivotally secured to said implement receiving collar 3 and is pivotally moved between said storage position and said in use position.

18. Per claim 13, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses a plurality of implements 9 each of which is receivable in any of said implement receiving carriers 5.

19. Per claim 14, the modified drill accessory of Cowley discloses the invention as claimed, as Carter further discloses the use of a spring 26 for releasable securement in any of said implement receiving carriers 12, 13, 14, 15.

20. Per claim 15, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement 9 received in any of said implement receiving carriers 5 is slidably displaceable within the implement receiving carrier 5.

21. Per claim 16, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving carrier 5 has a distal end with an implement receiving port 7, and a pivot securement end opposite said distal end, said pivot securement end being attached to said implement receiving collar 3.

22. Per claim 17, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses each implement receiving carrier 5 has an elongate shank 6 connecting said distal end and said pivot securement end and said

distal end has an outwardly extending flange which includes said implement receiving port 7.

23. Per claim 18, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses said outwardly extending flange in said in use position of said implement receiving carrier 5 aligns said implement receiving port 7 with said implement receiving socket 16 of said drive shaft.

24. Per claim 19, the modified drill accessory of Cowley discloses the invention as claimed, as Cowley further discloses said outwardly extending flange of each implement receiving carrier 5 in said storage position thereof positions said outwardly extending flange generally perpendicular to a circular side of said implement receiving collar 3 and immediately adjacent thereto. In the alternative, it would have been obvious to one of ordinary skill in the art to modify the storage location of the implement receiving carrier of Cowley to be perpendicular to the cylindrical side of the implement receiving carrier, as this would only have required a modification to a temporary location of the implement receiving carrier.

25. Per claim 20, the modified drill accessory of Cowley discloses the invention substantially as claimed, except Cowley does not disclose the implement receiving collar to be longitudinally slidable on said elongate drive shaft between an implement retaining position and an implement release position, said implement receiving collar including an associated spring bias member for urging said implement receiving collar to said implement retaining position. Holland teaches an implement receiving collar 30 that is longitudinally slidable on an elongate drive shaft 20 between an implement

retaining position and an implement release position, said implement receiving collar 30 including an associated spring bias member 60 for the purpose of urging said implement receiving collar 30 to said implement retaining position. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the slidable implement receiving collar and spring bias member of Holland in order to obtain a multi-tool drill accessory with a quick release tool holder.

26. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowley in view of Carter and Holland and further in view of Xu (Taiwanese Patent 326734).

27. Per claims 21-23, the modified drill accessory of Cowley discloses the invention substantially as claimed, except Cowley does not disclose a spring biased latch which is received in a side port of said drive shaft to protrude into said implement receiving socket and rotates with said drive shaft, said implement receiving collar cooperating with said implement receiving socket to retain said latch partially protruding into said implement receiving socket when said implement receiving collar is in said implement retaining position. Cowley also does not disclose each implement including a retaining groove at one end thereof for receiving said spring biased latch to releasably lock the implement when received in said drive shaft socket, or wherein each implement inserted in said drive shaft socket cams said spring biased latch outwardly against the bias of said spring biased latch and locks said implement against withdrawal from said socket while said implement receiving collar is in said implement retaining position.

28. Per claim 21, Xu teaches the use of a spring biased latch 30 which is received in a side port of a drive shaft 10 to protrude into an implement receiving socket 111 and rotates with said drive shaft 10, with an implement receiving collar 40 cooperating with said implement receiving socket 111 to retain said latch partially protruding into said implement receiving socket when the implement receiving collar 40 is in said implement retaining position, for the purpose of holding the implement B in the working position during rotation of the drill. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the spring biased latch of Xu in order to provide a drill accessory with an implement quick release mechanism.

29. Per claim 22, Xu teaches the implement B to include a retaining groove a1 at one end thereof for the purpose of receiving said spring biased latch 30 to releasably lock the implement B when received in said drive shaft socket 111. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the implement retaining groove of Xu in order to provide a drill accessory with an implement specially designed to work with the implement quick release mechanism.

30. Per claim 23, Xu teaches the implement B, when inserted in said drive shaft socket 111, cams said spring biased latch 30 outwardly against the bias of said spring biased latch 30 for the purpose of locking said implement B against withdrawal from said socket 111 while said implement receiving collar 40 is in the implement retaining position. Therefore it would have been obvious to one having ordinary skill in the art of

power drills to have modified the drill accessory of Cowley with the spring biased latch of Xu in order to provide a drill accessory with an implement and spring biased latch specially designed to create an implement quick release mechanism.

31. Claims 24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowley in view of Carter and further in view of Xu.

32. Per claims 24 and 26-28, the modified drill accessory of Cowley discloses the invention substantially as claimed, except Cowley does not disclose a spring biased latch associated with said implement receiving socket for releasably retaining an implement in said drive socket, said spring biased latch including a coil spring having a segment thereof displaceable into and out of said implement receiving socket to form a releasable latch with a retaining groove of an implement received in a drive position within said drive socket. Cowley also does not disclose said segment of said coil spring to be an end segment which extends radially inwardly of the diameter of said coil spring, or said end segment to be received in an angled groove of said drive socket and biased to a retaining position extending into said drive socket and displaceable to a release position by movement along said angled groove to a position releasing an implement received in said drive socket, or said end segment being an inwardly bent section which is received in a slot of said drive shaft and serves to retain said spring biased latch captured on said drive shaft.

33. Per claim 24, Xu teaches a spring biased latch 30 associated with said implement receiving socket 111 for releasably retaining an implement B in said drive socket 111, said spring biased latch 30 including a coil spring 30 having a segment 31

thereof displaceable into and out of said implement receiving socket 111 for the purpose of forming a releasable latch with a retaining groove of an implement B received in a drive position within said drive socket 111. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the coil spring of Xu in order to provide a drill accessory with an improved implement quick release mechanism.

34. Per claim 26, Xu teaches said segment 31 of said coil spring 30 is an end segment which extends radially inwardly of the diameter of said coil spring for the purpose of latching to said implement receiving socket 111. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the coil spring of Xu in order to provide a drill accessory with an improved implement quick release mechanism.

35. Per claim 27, Xu teaches said end segment 31 is received in an angled groove 112 of said drive socket 111 and is biased to a retaining position extending into said drive socket 111 and is displaceable to a release position by movement along said angled groove 112 for the purpose of releasing an implement B received in said drive socket 111. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the coil spring of Xu in order to provide a drill accessory with an improved implement quick release mechanism.

36. Per claim 28, Xu teaches said end segment 31 to be an inwardly bent section which is received in a slot 112 of said drive shaft 10 for the purpose of retaining said

spring biased latch 30 on said drive shaft 10. Therefore it would have been obvious to one having ordinary skill in the art of power drills to have modified the drill accessory of Cowley with the coil spring of Xu in order to provide a drill accessory with an implement quick release mechanism.

Allowable Subject Matter

37. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fegley (U.S. Patent 1,138,465) teaches a spring clip used to retain tools in a chuck. Luna (U.S. Patent 2,303,565) teaches a power tool with pivoting tool holders. Hobbs (U.S. Patent 5,022,131) teaches a tool bit selection device. Peters (U.S. Patent Publication 2003/0230862 A1) and Chen (U.S. Patent 6,860,489) teach bit holders with spring release mechanisms.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Gates whose telephone number is 571-272-5498. The examiner can normally be reached on Monday-Thursday 7:00-4:30 & alt Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/8/05

EAG

Eric A. Gates
Patent Examiner
Art Unit 3722

BOYER D. ASHLEY
PRIMARY EXAMINER